Compatibility Determination

Use: Haying for habitat management

Refuge Name: Patoka River National Wildlife Refuge and Management Area (NWR)

Establishing and Acquisition Authorities: Patoka River NWR was established on September 7, 1994. Legal authorities used for establishment of the Refuge include: Emergency Wetlands Resources Act 1986 (16 U.S.C. 3901), An Act Authorizing the Transfer of Certain Real Property for Wildlife (16 U.S.C. 667b), and North American Wetlands Conservation Act (16 U.S.C. 4401-4413).

Refuge Purpose(s):
"... the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions ...Ó 16 U.S.C. 3901(b)
(Emergency Wetlands Resources Act of 1986)

"... particular value in carrying out the national migratory bird management program. 16 U.S.C. 667b (An Act Authorizing the Transfer of Certain Real Property for Wildlife)

"... (1) to protect, enhance, restore, and manage an appropriate distribution and diversity of wetland ecosystems and other habitats for migratory birds and other fish and wildlife in North America; (2) to maintain current or improved
distributions of migratory bird populations; and (3) to sustain an abundance of waterfowl and other migratory birds consistent with the goals of the North American Waterfowl Management Plan and the international obligations contained in the migratory bird treaties and conventions and other agreements with Canada, Mexico, and other countries." 16 U.S.C. 4401-4413 (North American Wetlands Conservation Act)

National Wildlife Refuge System Mission: The Mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use: The Refuge will allow haying by private individuals for the purpose of habitat management. Haying is the cutting and processing (typically baling) of grass and forbs, with subsequent removal to an off-Refuge location. Haying will be conducted by third parties on grasslands owned by or managed as part of the Refuge by jurisdictional agreement. Haying of any area is usually conducted as a single event during any one year, but may be repeated periodically to: remove undesirable grasses and forbs; remove accumulated plant biomass; remove or reduce woody vegetation; provide a desired vegetative condition; reduce vegetation fuel levels where wildfires are a concern, such as near urban areas; to create or maintain firebreaks for prescribed fire operations; or prepare sites for establishment of desired vegetation, including forest, prairie or wetland communities.

Haying is conducted through a Special Use Permit issued by the Refuge. Permits will be issued annually.

Is the use a priority public use?
Haying is not a priority public use of the National Wildlife Refuge System.

Where would the use be conducted?
Haying will occur on various Refuge areas to improve or maintain grasslands, oak savanna, and wetland habitats. The locations chosen to use haying as a management tool would occur as part of strategies developed under specific program or unit habitat management planning.

When would the use be conducted?
Haying will take place between June and September depending on habitat management strategies.

How would the use be conducted?
Haying activities will be subject to the terms and conditions of a Cooperative Farming Agreement or Special Use Permit issued by the Refuge Manager. The terms of the Agreement or Permit ensure compatibility through implementation of Service policy and Refuge specific stipulations.

Why is this use being proposed?
Haying is a management tool to maintain and restore refuge habitats. Haying is a viable alternative for rejuvenating and maintaining decadent grasslands. Firebreaks free of fuels in the form of duff are essential to controlling prescribed fire operations. Haying is a viable alternative for maintaining effective firebreaks.

Availability of Resources:

What resources are needed to properly (considering quality and compatibility) and safely administer use?
No additional fiscal resources are needed to conduct this use. Most of the needed work to prepare for this use would be done as part of routine management duties. The additional time needed to coordinate issuance and oversight of the needed Special Use Permits is relatively minor and within existing Refuge resources. Costs would be off-set by the benefits of habitat restoration without using staff time or equipment to conduct the activity.

Are existing refuge resources adequate to properly and safely administer the use?
The needed staff time for development and administration of a haying program is available. The additional time needed to coordinate issuance and oversight of the needed Special Use Permits is relatively minor and within existing Refuge resources. Monitoring of haying effects will be easily incorporated into the existing monitoring program.

Anticipated Impacts of the Use:

How does haying affect Refuge purposes and the NWRS mission?
The use of haying provides a management tool that allows the Refuge staff to meet the habitat goals and objectives of the Refuge.

How does haying affect fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the NWRS?
Haying will result in short-term disturbances and long-term benefits to both resident and migratory wildlife using the Refuge. Short-term impacts will include disturbance and displacement by equipment

operation. Haying activities will also result in short-term loss of habitat for species using those areas for nesting, feeding, or resting. In these same areas, long-term impacts will be beneficial by helping to restore and reinvigorate native habitats need by these same species. Units selected for grassland management by haying will rotate throughout the Refuge each year so that it does not occur in the same unit consecutively year after year. A typical unit will be hayed only once every three or more years for habitat management. Control of the timing of haying and depth of cut will limit anticipated impacts.

In firebreaks, the negative impacts listed above will be both short-term and long-term as these areas will be hayed several times throughout the year, every year, to protect habitats and neighboring landowners from wildfire. Impacts from creating firebreaks through mowing cannot be avoided as these management activities are a safety measure to protect property during prescribed burns from wildfire. However, the addition of haying on firebreaks will increase the effectiveness of firebreaks by removing fire fuels.

Public Review and Comment: